with the first embodiment described above, in which case the same refrigerant supply **28** is connected to both the inlet tubes **18, 36** and outlet tubes **20, 38**. Or, when used alone, a refrigerant supply equivalent to the refrigerant supply **28** of FIG. **2** is connected to the tubes **36,38**.

The invention has been described in detail with particular reference to preferred embodiments thereof, but it will be understood that variations and modifications can be effected within the spirit and scope of the invention. For example, the first embodiment of the invention may be incorporated into a neck support collar used for supporting an injured patient's head.

What is claimed is:

1. Apparatus for inducing hypothermia in a patient's brain, said apparatus comprising:

a) an endotracheal tube having a first end and second end,

b) a toroidal shaped bladder surrounding said tube proximate said first end of said tube, said first end for insertion into said patient's trachea whereby said bladder contacts the tissues and blood vessels of said patient's oral cavity,

c) a source of liquid or gaseous coolant, said source for providing coolant to said bladder,

d) inlet and outlet coolant conducting elements connected to said toroidal shaped bladder, whereby said coolant from said source flowing through said inlet and outlet coolant conducting elements cools said bladder, further whereby when said first end of said endotracheal tube is inserted into said patient's trachea, said coolant flowing in said bladder lowers the temperature of said tissues and blood vessels of said patient's oral cavity in contact with said bladder, said tissues and blood vessels further acting as heat conducting paths from said brain to said bladder whereby the temperature of said brain is lowered.

2. The apparatus of claim **1** wherein said endotracheal tube and said bladder comprise non-metallic fabric or plastic materials, whereby said apparatus is compatible with X-ray, MRI or CAT scan procedures.

3. The apparatus of claim **1** further comprising refrigeration means supplying said coolant.

4. A method of inducing hypothermia in a patient's brain comprising the step of:

a) cooling said brain by lowering the temperature of the blood flowing in blood vessels located in said patient's oral cavity,

b) inserting an endotracheal tube into contact with said patient's trachea, said endotracheal tube having a toroidial bladder surrounding said endotracheal tube, said bladder being in contact with blood vessels located at the rear of said patient's oral cavity,

c) flowing coolant through said bladder by means of an inlet tube to said bladder and an outlet tube from said bladder, whereby said blood vessels are lowered in temperature to cool said brain.

5. The method of claim **4** further comprising the steps of:

a) inserting an endotracheal tube into contact with said patient's trachea, said endotracheal tube having a toroidal bladder surrounding said endotracheal tube, said bladder being in contact with blood vessels located at the rear of said patient's oral cavity and

b) flowing coolant through said bladder by means of an inlet tube to said bladder and an outlet tube from said bladder, whereby said blood vessels are lowered in temperature to cool said brain.

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